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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/696,484 | 10/29/2003 | John M. Smith III | 2250-13A | 6978 |
| 4678 | 7590 | 04/03/2007 | EXAMINER | |
| MACCORD MASON PLLC 300 N. GREENE STREET, SUITE 1600 P. O. BOX 2974 GREENSBORO, NC 27402 | | | CAMERON, ERMA C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1762 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE | | |
| 3 MONTHS | 04/03/2007 | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/696,484 | SMITH ET AL. | |
| | Examiner | Art Unit | |
| | Erma Cameron | 1762 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 January 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 23-42 is/are pending in the application.
- 4a) Of the above claim(s) 25-29,35-39 and 41 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 23-24, 30-34, 40, 42 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 23-24, 30-34, 40 and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification contains two contradictory ideas.

- A) The first is that the finishing composition must contain a flame retardant. This is stated at:
- a) 4:8 “The chemical treatment of the present invention comprises exposing the inherently FR textile material to an aqueous solution of a wetting agent and a flame retardant and one or more of: an antimicrobial agent, a water repellent agent, or a soil resistance agent...a flame retardant may be added to the chemical treatment composition to ensure that the inherent flame retardant remains chemically coupled with the polyester fiber.”

b) The difference between Examples 1 and 2: Example 1 contains flame retardant, and the treated fabric passes the flammability test; Example 2 lacks flame retardant, and fails the flammability test.

c) 9:15-19 "...the inherently flame resistance properties of AVORA fabric degrade after a post-weave chemical treatment. However, the present inventor has found if a flame retardant is added during the chemical treatment coating process, the fabric retains a flame resistance substantially similar to untreated inherently flame resistance fabric."

B) On the other hand there are statements indicating that a flame retardant is NOT needed in the claimed invention:

d) 3:4-5 "...wherein the finish imparts a property selected from the group consisting of: an antimicrobial agent, a soil repellent and a fluid repellent." (no mention of flame retardant)

e) Examples 3, 4, 6 and 9 lack flame retardant, and yet pass the flammability test.

f) 13:13-16 "But, it is not a requirement for the present invention to require the addition of flame retardant to the desired chemical treatment in order for the treated fabric to have an equal flame resistance to the untreated inherently FR fibers."

These two ideas contradict each other, and make the specification confusing.

The applicant has stated that the specification has been amended to remove these inconsistencies, but it appears that many of the inconsistencies are still present.

3. The objection to the amendment filed 11/25/2005 to under 35 U.S.C. 132(a) ("new matter") is withdrawn because of the amendment filed 9/12/2007.
4. The rejection of Claims 23-24, 30-34, 40 and 42 under 35 U.S.C. 112, first paragraph, ("Table I") is withdrawn because of the amendment filed 1/12/2007.
5. The rejection of Claims 23-24, 30-34, 40 and 42 under 35 U.S.C. 112, first paragraph, ("flame retardant") is withdrawn because of the amendment filed 1/12/2007.
6. The rejection of Claims 23-24, 30-34, 40 and 42 under 35 U.S.C. 112, first paragraph, ("new matter" regarding Avora, etc) is withdrawn because of the amendment filed 1/12/2007.

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7. The objection to the amendment filed 11/25/2005 under 35 U.S.C. 132(a) is withdrawn because of the amendment filed 1/12/2007.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. *The rejection of Claims 23-24, 30-34, 40 and 42 under 35 U.S.C. 112, second paragraph,* is withdrawn because of the amendment filed 1/12/2007.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 42, 23 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 07-157977.

'977 teaches applying by immersion or other methods a fluoropolymer waterproofing and flame retardant P-300 or CDP composition to a fire-resistant polyester (Trevira CS) (see Abstracts and [004], [0007], [0013], [0021], [0022] and Table I of translation), thus meeting the

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limitations of claims 40 and 42. Immersion would inherently saturate the polyester Trevira cloth.

As a fire-resistant polyester, Trevira CS would inherently pass the NFPA 701 test.

Response to Arguments

Regarding applicant's statement that '977 does not teach a FR agent as a finishing agent, Table 1 clearly shows that flame retardants P-300 and CDP are part of the composition.

12. Claims 42, 23 and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by EP 503114.

'114 teaches applying a composition comprising a waterproofing fluorocarbon like Scotchguard and a flame retardant to Trevira CS to give the Trevira oil-, soil-, and water-repellency as well as durable flame retardation (see Abstracts, in particular the WPIX Abstract, and pages 4-6, claims 1, 7, 11). As a fire-resistant polyester, Trevira CS would inherently pass the NFPA 701 test.

Response to Arguments

The applicant has stated that '114 does not teach a FR agent. However, this is not the case, as can be seen from the paragraph above.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-157977.

‘977 is applied here for the reasons given above.

‘977 does not teach that the composition is applied by padding, but it would have been obvious to one of ordinary skill in the art to have used a conventional application method such as padding in the ‘977 process.

15. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 503114.

‘114 is applied here for the reasons given above.

‘114 teaches that the composition is applied in a finishing bath (page 9), but does not teach that the composition is applied by padding. But it would have been obvious to one of ordinary skill in the art to have used a conventional application method such as padding in the ‘114 process.

16. Claims 30-31 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-17977 taken in view of White et al (A Comparison of Antimicrobials for the Textile Industry, 2000).

‘977 is applied here for the reasons given above.

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‘977 does not teach the use an antimicrobial such as an organosilane.

White teaches that a molecularly bound organosilane is used as an antimicrobial in the textile industry (p 2).

It would have been obvious to one of ordinary skill in the art to have used the antimicrobial organosilanes of White in the treatment composition of ‘977 because of the need for an antimicrobial on a fabric exposed to the weather and wetness as the tarpaulin fabric of ‘977 is.

White does not teach the % of antimicrobial to add, but it would have been obvious to one of ordinary skill in the art to have optimized the level of antimicrobial through no more than routine experimentation as concentration is known to be an important factor to control in achieving efficacy of an antimicrobial.

17. Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-157977 taken in view of Blehm et al (4842766).

‘977 is applied here for the reasons given above.

‘977 does not teach the using an antimicrobial such as an organosilane like the silane of claim 32.

‘766 teaches that a silane such as 3-(trimethoxysilyl)-propyldimethyloctadecyl ammonium chloride may be used as an antimicrobial on polyester fabric at 0 to 5 weight % (see Example 5). Silanes are known as coupling agents, because they covalently bind to other substances. ‘766 reports that the silane is durably bound to the substrate it is applied to (8:3-8).

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The application concentration overlaps with applicant's claimed concentration.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness. See *In re Malagari* 182 USPQ 549.

It would have been obvious to one of ordinary skill in the art to have used the antimicrobial silane of '766 in the treatment composition of '977 because of the need for an antimicrobial on a fabric exposed to the weather and wetness as the tarpaulin fabric of '977 is.

18. Claims 30-31 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 503114 taken in view of White et al (A Comparison of Antimicrobials for the Textile Industry, 2000).

'114 is applied here for the reasons given above.

'114 does not teach the use an antimicrobial such as an organosilane.

White teaches that a molecularly bound organosilane is used as an antimicrobial in the textile industry (p 2).

It would have been obvious to one of ordinary skill in the art to have used the antimicrobial organosilanes of White in the treatment composition of '114 because of the need for an antimicrobial on a fabric exposed to the weather and wetness as the awning fabric of '114 is (page 5).

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White does not teach the % of antimicrobial to add, but it would have been obvious to one of ordinary skill in the art to have optimized the level of antimicrobial through no more than routine experimentation as concentration is known to be an important factor to control in achieving efficacy of an antimicrobial.

19. Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 503114 taken in view of Blehm et al (4842766).

‘114 is applied here for the reasons given above.

‘114 does not teach the using an antimicrobial such as an organosilane like the silane of claim 32.

‘766 teaches that a silane such as 3-(trimethoxysilyl)-propyldimethyloctadecyl ammonium chloride may be used as an antimicrobial on polyester fabric at 0 to 5 weight % (see Example 5). Silanes are known as coupling agents, because they covalently bind to other substances. ‘766 reports that the silane is durably bound to the substrate it is applied to (8:3-8).

The application concentration overlaps with applicant’s claimed concentration.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness. See *In re Malagari* 182 USPQ 549.

It would have been obvious to one of ordinary skill in the art to have used the antimicrobial silane of ‘766 in the treatment composition of ‘114 because of the need for an

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antimicrobial on a fabric exposed to the weather and wetness as the awning fabric of '114 is
(page 5).

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erma Cameron
ERMA CAMERON
PRIMARY EXAMINER

March 29, 2007

Erma Cameron
Primary Examiner
Art Unit 1762